

Amendments to the Claims

The following listing of claims shall supersede all previously submitted versions.

Claims Listing

1. (Currently Amended) A method for determining a target lifetime for a physical vapor deposition tool, comprising the steps of:

selecting criteria for a minimum accumulating rate of a number of A wafers fabricated per unit of deposit time by a change in A target life for a target in the tool;

recording actual values of the number of A wafers fabricated per unit of deposit time by the change in A target life for a target in the tool; for a time period;

comparing a calculated, reported accumulating rate with a calculated, minimum accumulating rate, and

~~checking the condition of the target in the tool,~~

deciding whether to replace the target, when the reported accumulating rate is less than the minimum accumulating rate.

2. (Currently Amended) The method of claim 1, ~~and~~ further comprising the steps of:

recording the criteria in a table for multiple targets in respective multiple ones of the tool; and

selecting the criteria by retrieving the criteria from the table.

3. (Currently Amended) The method of claim 1, ~~and~~ further comprising the step of: generating an alarm when the reported accumulating rate is less than the minimum accumulating rate.

4. (Currently Amended) The method of claim 1, wherein, the step of selecting criteria for a minimum accumulating rate, further comprises ~~the step of~~ selecting the criteria of thinnest wafers fabricated by the tool for a minimum accumulating rate of the number of A thinnest wafers fabricated per unit of deposit time by the change in A target life for a target in the tool.

5. (Currently Amended) The method of claim 4, ~~and~~ further comprising the step of: recording the criteria in a table for multiple targets in respective multiple ones of the tool.

6. (Currently Amended) The method of claim 4, ~~and~~ further comprising the step of: generating an alarm when the reported accumulating rate is less than the minimum accumulating rate.
7. (Currently Amended) The method of claim 1, wherein; the step of comparing a calculated reported accumulating rate with a calculated; minimum accumulating rate; further comprises the step of comparing a graph of the reported accumulating rate with a slope of the minimum accumulating rate for one KWH of tool power.
8. (Currently Amended) The method of claim 7, ~~and~~ further comprising the step of: generating an alarm when the graph has a slope that is less than the slope of the minimum accumulating rate for one KWH of tool power.
9. (Currently Amended) The method of claim 7, ~~and~~ further comprising the step of: recording the criteria in a table for multiple targets in respective multiple ones of the tool.
10. (Currently Amended) The method of claim 7, ~~and~~ further comprising the step of: generating an alarm when the reported accumulating rate is less than the minimum accumulating rate.
11. (Currently Amended) The method of claim 7, wherein; the step of selecting criteria for a minimum accumulating rate; further comprises the step of selecting the criteria of thinnest wafers fabricated by the tool for a minimum accumulating rate of the number of A thinnest wafers fabricated per unit of deposit time by the change in A target life for a target in the tool.
12. (Currently Amended) A system for determining a lifetime of a target for a physical vapor deposition tool, comprising:
- a mapping table of criteria for a minimum accumulating rate of a number of A wafers fabricated per unit of deposit time by the change in A target life for a target in the tool;
 - a database recording the number of A wafers fabricated per unit of deposit time by the change in A target life for a target in the tool; and
 - a computer retrieving the criteria from the mapping table and entering the criteria in the database; ~~and~~

wherein the tool is configured to (a) compare a calculated reported accumulating rate with the minimum accumulating rate; (b) reporting the number of Δ wafers fabricated per unit of deposit time by the change in Δ target life for a target in the tool for comparison with the criteria; and (c) deciding whether to replace the target when the reported accumulating rate is less than the minimum accumulating rate.